



# UNITED STATES PATENT AND TRADEMARK OFFICE

A-W  
UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/068,903	02/11/2002	Kian Sheikh-Bahaie	13907	3542
7590	10/10/2003		EXAMINER	
			ELLINGTON, ALANDRA	
			ART UNIT	PAPER NUMBER
			2855	
DATE MAILED: 10/10/2003				

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/068,903	SHEIKH-BAHAIE, KIAN	
	<b>Examiner</b>	<b>Art Unit</b>	P.A.
	Alandra N Ellington	2855	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on \_\_\_\_\_.  
 2a) This action is FINAL.                    2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-43 is/are pending in the application.  
 4a) Of the above claim(s) 44-46 is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 1-6, 10, 19-27, 30, 33-35, 37, 40 and 41 is/are rejected.  
 7) Claim(s) 7-9, 11-18, 28, 29, 31, 32, 36, 38, 39, 42 and 43 is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on 11 February 2002 is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 11) The proposed drawing correction filed on \_\_\_\_\_ is: a) approved b) disapproved by the Examiner.  
 If approved, corrected drawings are required in reply to this Office action.  
 12) The oath or declaration is objected to by the Examiner.

#### Priority under 35 U.S.C. §§ 119 and 120

- 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
 \* See the attached detailed Office action for a list of the certified copies not received.  
 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
 a) The translation of the foreign language provisional application has been received.  
 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                           | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2 . | 6) <input type="checkbox"/> Other: _____                                    |

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-43, drawn to a mounting system, classified in class 73, subclass 146.8.
- II. Claims 44 and 45, drawn to a tire conditioning system, classified in class 73, subclass 146.4.
- III. Claim 46, drawn to a method of enabling measurements of a tire condition, classified in class 73, subclass 146.4.

The inventions are distinct, each from the other because:

Inventions II and I are related as combination and subcombination. Inventions in this relationship are distinct if it can be shown that (1) the combination as claimed does not require the particulars of the subcombination as claimed for patentability, and (2) that the subcombination has utility by itself or in other combinations (MPEP § 806.05(c)). In the instant case, the combination as claimed does not require the particulars of the subcombination as claimed because the combination as claimed does not require the particulars of the subcombination as claimed for patentability. The subcombination has separate utility because a tire can be mounted in many locations.

Inventions I and III are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (MPEP § 806.05(h)). In the instant case the process for

using the product as claimed can be practiced with another materially different product because a method of measurement can be used with any tire condition sensor.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

During a telephone conversation with Ralph Dowell on 5/17/03 a provisional election was made with traverse to prosecute the invention of I, claims 1-43. Affirmation of this election must be made by applicant in replying to this Office action. Claims 44-46 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1-6, 10, 19-21, 30, 33, 37 and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nigon et al (6,549,125 B2) in view of Synder (4,510,484).

With respect to Claim 1, Nigon et al discloses an apparatus for mounting a tire condition sensor 16 to a wheel rim 10 with a housing 20, a lock 24 on the housing 20, and a connector 18 for connecting the housing 20 to the wheel rim 10 (col. 2 lines 66-

Art Unit: 2855

67, col. 3 lines 1- 20 {Figs. 2-4}). However, Nigon et al does not specifically teach a housing having a receptacle with a shape complementary to the capsule to receive the capsule snugly therein and the capsule being between a portion of the wheel rim and the receptacle. Synder teaches teach a housing 14 having a receptacle with a shape complementary to the capsule 10 to receive the capsule 10 snugly therein and the capsule 10 being between a portion of the wheel rim 18 and the receptacle (col. 3 lines 60-63 {Figs. 1 and 5}). It would have been obvious at the time the invention was made to one having ordinary skill in the art to modify Nigon et al with the teachings of Synder to include a housing having a receptacle with a shape complementary to the capsule to receive the capsule snugly therein and the capsule being between a portion of the wheel rim and the receptacle for the purpose of protecting the sensor components of the capsule housing during operation in order to gain accurate measurements.

With respect to Claim 2, Nigon et al discloses a housing 20 comprising a wall 20,22 ({Figs. 2-4}).

With respect to Claim 3, Nigon et al discloses a lock 24 that is on the wall 20,22 (col. 3 lines 17-20,28-31 {Figs. 2-4}).

With respect to Claim 4, Nigon et al discloses a wall with first and second spaced apart side portions 22 (col. 3 lines 17-20 {Fig. 2}).

With respect to Claim 5, Nigon et al discloses a lock 24 that is on at least one of the first and second side portions 22 (col. 3 lines 17-20 {Figs. 2 and 3}).

With respect to Claim 6, Nigon et al discloses a lock 24 with first and second clips 26 on the first and second side portions 22 (col. 5 lines 2-5 {Fig. 5}).

With respect to Claim 10, Nigon et al discloses a wall 20,22 with a weight reducing void 34 ({Fig. 4}).

With respect to Claim 19, Nigon et al discloses a housing 20 that is rigid (col. 3 lines 11-16).

With respect to Claim 20, Nigon et al discloses a housing 20 formed of injection molded plastic (col. 3 lines 11-16).

With respect to Claim 21, Nigon et al discloses a connector 18 with first and second fasteners receivers 24 on first and second end portions 22 of the housing 20 (col. 3 lines 17-31 {Figs. 2-4}).

With respect to Claim 30, Nigon et al discloses a method for mounting a tire condition sensor 16 to a wheel rim 10 by receiving the housing 20, locking the housing and connecting the housing 20 to the wheel rim 10 (col. 2 lines 66-67, col. 3 lines 1- 20 {Figs. 2-4}). However, Nigon et al does not specifically teach a housing having a receptacle with a shape complementary to the capsule and the capsule being between a portion of the wheel rim and the receptacle. Synder teaches teach a housing 14 having a receptacle with a shape complementary to the capsule 10 and the capsule 10 being between a portion of the wheel rim 18 and the receptacle (col. 3 lines 60-63 {Figs. 1 and 5}). It would have been obvious at the time the invention was made to one having ordinary skill in the art to modify Nigon et al with the teachings of Synder to include a housing having a receptacle with a shape complementary to the capsule and the capsule being between a portion of the wheel rim and the receptacle for the purpose of

protecting the sensor components of the capsule housing during operation in order to gain accurate measurements.

With respect to Claim 33, Nigon et al discloses a housing 20 connected to the wheel rim 10 by fastening first and second end portion 22 of the housing 20 to corresponding mounting surfaces on the wheel rim 10 (col. 3 lines 17-31 {Figs. 2-4}).

With respect to Claim 37, Nigon et al discloses an apparatus for mounting a tire condition sensor 16 to a wheel rim 18 with a means for holding and protecting the sensor 20, a means for locking 24 the sensor in the means for holding and protecting 20, and a means for connecting 18 the means for holding and protecting to the wheel rim 10 (col. 2 lines 66-67, col. 3 lines 1- 20 {Figs. 2-4}). However, Nigon et al does not specifically teach a capsule being between a means for holding and protecting and the wheel rim. Synder teaches teach a capsule 10 between a means for holding and protecting 20 and the wheel rim 18 (col. 3 lines 60-63 {Figs. 1 and 5}). It would have been obvious at the time the invention was made to one having ordinary skill in the art to modify Nigon et al with the teachings of Synder to include a capsule being between a means for holding and protecting and the wheel rim for the purpose of protecting the sensor components of the capsule housing during operation in order to gain accurate measurements.

With respect to Claim 40, Nigon et al discloses connecting means 18 with first and second fasteners receivers 24 on the means for holding and protecting 20 (col. 3 lines 17-31 {Figs. 2-4}).

2. Claims 22-24, 34, 35 and 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nigon et al (6,549,125 B1) in view of Synder (4,510,484) as applied to claim 1 above, and further in view of Chang et al (6,591,672 B2).

With respect to Claim 22, Nigon et al discloses an apparatus for mounting a tire condition sensor 16 to a wheel rim 18 with a housing 20, a lock 24 on the housing 20, and a connector 18 for connecting the housing 20 to the wheel rim 18 (col. 2 lines 66-67, col. 3 lines 1- 20 {Figs. 2-4}). Synder teaches teach a housing 14 having a receptacle with a shape complementary to the capsule 10 to receive the capsule 10 snugly therein and the capsule 10 being between a portion of the wheel rim 18 and the receptacle (col. 3 lines 60-63 {Figs. 1 and 5}). However, Nigon et al in view of Synder does not teach a valve stem connector operable to cooperate with a valve stem of the wheel to secure the housing to the wheel rim. Chang et al teaches a valve stem connector 17 operable to cooperate with a valve stem 19 of the wheel to secure the housing to the wheel rim 43 (col. 3 lines 54-67, col. 4 lines 37-47 {Figs. 2 and 5}). It would have been obvious at the time the invention was made to one having ordinary skill in the art to modify the combination Nigon et al and Synder with the teachings of Chang et al to include a valve stem connector operable to cooperate with a valve stem of the wheel to secure the housing to the wheel rim for the purpose of securely attaching the pressure device to the rim of the tire in order to inspect the tire condition at any time (see Chang et al, col. 1 lines 24-62).

With respect to Claim 23, Chang et al discloses a valve stem connector 17 with a valve stem receptacle in a housing for receiving a portion of the valve stem 19 (col. 3 lines 54-67 {Fig. 3}).

With respect to Claim 24, Chang et al discloses a connector further comprising an opening 51,53 in the housing, in communication with the valve stem receptacle, for receiving a fastener operable to fasten the valve stem 19 in the valve stem receptacle (col. 3 lines 54-57 {Fig. 3}).

With respect to Claims 34 and 35, Chang et al discloses a housing connected to the wheel rim 43 with a receiving portion of a valve stem 19 (col. 3 lines 54-67 {Fig. 3}).

With respect to Claim 41, Chang et al discloses connecting means with a valve stem connector 17 operable to cooperate with a stem valve 19 of the wheel to secure the means for holding and protecting to the wheel rim 43 (col. 3 lines 54-67, col. 4 lines 37-47 {Figs. 2 and 5}).

3. Claims 25 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nigon et al (6,549,125 B1) in view of Synder (4,510,484) as applied to claim 1 above, and further in view of Nowicki et al (5,559,484).

With respect to Claim 25, Nigon et al discloses an apparatus for mounting a tire condition sensor 16 to a wheel rim 18 with a housing 20, a lock 24 on the housing 20, and a connector 18 for connecting the housing 20 to the wheel rim 18 (col. 2 lines 66-67, col. 3 lines 1- 20 {Figs. 2-4}). Synder teaches teach a housing 14 having a

receptacle with a shape complementary to the capsule 10 to receive the capsule 10 snugly therein and the capsule 10 being between a portion of the wheel rim 18 and the receptacle (col. 3 lines 60-63 {Figs. 1 and 5}). However, Nigon et al in view of Synder does not teach a connector comprising a strap holder operable to cooperate with a strap that extends around the wheel to secure the housing to the wheel. Nowicki et al teaches a connector comprising a strap holder 26 operable to cooperate with a strap 24 that extends around the wheel to secure the housing 18 to the wheel (col. 3 lines 56-58 {Fig. 1}). It would have been obvious at the time the invention was made to one having ordinary skill in the art to modify the combination Nigon et al and Synder with the teachings of Nowicki et al to include a connector comprising a strap holder operable to cooperate with a strap that extends around the wheel to secure the housing to the wheel for the purpose of securely attaching the sensor device to the wheel rim.

With respect to Claim 26, Nigon et al discloses a housing 20 formed of injection molded plastic (col. 3 lines 11-16).

4. Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nigon et al (6,549,125 B1) in view of Synder (4,510,484) as applied to claim 1 above, and further in view of Daly et al (4,487,154).

With respect to Claim 27, Nigon et al discloses an apparatus for mounting a tire condition sensor 16 to a wheel rim 18 with a housing 20, a lock 24 on the housing 20, and a connector 18 for connecting the housing 20 to the wheel rim 18 (col. 2 lines 66-

Art Unit: 2855

67, col. 3 lines 1- 20 {Figs. 2-4}). Synder teaches teach a housing 14 having a receptacle with a shape complementary to the capsule 10 to receive the capsule 10 snugly therein and the capsule 10 being between a portion of the wheel rim 18 and the receptacle (col. 3 lines 60-63 {Figs. 1 and 5}). However, Nigon et al in view of Synder does not teach Daly et al teaches a strap holder formed in the housing. Daly et al teaches a strap holder 18 formed in the housing 32 (col. 2 lines 44-64, col. 3 lines 13-17 {Figs. 1 and 2}). It would have been obvious at the time the invention was made to one having ordinary skill in the art to modify the combination Nigon et al and Synder with the teachings of Daly et al to include a strap holder formed in the housing for the purpose of securely attaching the sensor device to the wheel rim.

***Allowable Subject Matter***

5. Claims 7-9,11-18, 28, 29, 31,32, 36, 38, 39, 42 and 43 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alandra N. Ellington whose telephone number is (703)305-4449. The examiner can normally be reached on Monday - Friday, 6:30am - 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Lefkowitz can be reached on (703)305-4816. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0956.

Alandra Ellington  
Art Unit 2855

ane



EDWARD LEFKOWITZ  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2800